

Circulation Research

JOURNAL OF THE AMERICAN HEART ASSOCIATION



In Memoriam : Francis X. Witkowski

Stephen L. Archer

Circ. Res. 2000;86;823

Circulation Research is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75214

Copyright © 2000 American Heart Association. All rights reserved. Print ISSN: 0009-7330. Online ISSN: 1524-4571

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://circres.ahajournals.org/cgi/content/full/86/8/823>

Data Supplement (unedited) at:

<http://circres.ahajournals.org/cgi/content/full/86/8/823/DC1>

Subscriptions: Information about subscribing to Circulation Research is online at
<http://circres.ahajournals.org/subscriptions/>

Permissions: Permissions & Rights Desk, Lippincott Williams & Wilkins, a division of Wolters Kluwer Health, 351 West Camden Street, Baltimore, MD 21202-2436. Phone: 410-528-4050. Fax: 410-528-8550. E-mail:
journalpermissions@lww.com

Reprints: Information about reprints can be found online at
<http://www.lww.com/reprints>

In Memoriam Francis X. Witkowski

Stephen L. Archer

Frank Witkowski, a valued member of the Editorial Board of *Circulation Research*, died suddenly and prematurely on December 17, 1999, at the age of 53. Frank is survived by his wife, Dr Patricia Penkoske, and his three beloved daughters, Chloe, Elizabeth, and Olivia.

Frank was born in Brooklyn, New York. In 1969, he obtained a bachelor's degree in electrical engineering from Manhattan College, Bronx, New York, followed by a master's degree from Northeastern University in Boston. Frank had a pedigree quite distinct from that of most physicians. He was a member of Eta Kappa Nu (Electrical Engineering Honor Society), Tau Beta Pi (Engineering Honor Society), and Sigma Pi (Physics Honor Society). In 1978, Frank obtained a medical degree from Washington University School of Medicine, St. Louis, Missouri, where he subsequently trained in medicine and cardiology.

In 1984, he and Pat moved to Edmonton, Alberta, Canada, he as an assistant professor of medicine (cardiology) and she as a cardiovascular surgeon. Frank and Pat adopted Canada as their home. With funding from the Alberta Heritage Foundation for Medical Research, Frank began a lifelong pursuit of the mechanisms of ventricular fibrillation. His work for Raytheon on missile guidance systems would soon be applied to the design of ever-faster optical mapping systems. He will be remembered internationally for his original contributions to the study of the mechanisms of ventricular fibrillation. Frank applied chaos theory to data derived from his ultrafast optical mapping system. This magnificent invention permitted him to image the electrical

events in the first few milliseconds of ventricular fibrillation, using membrane potential-sensitive fluorescent dyes. He discovered that ventricular fibrillation began with organized rotors of electrical activity sweeping across the surface of the ventricle.

These organized rotors resembled cyclones, but they rapidly decayed into disorganized, hurricane-like storms of electrical chaos. This early organization offers potential clues to the origins and treatment of this most common deadly cardiac arrhythmia.

Frank will be missed for his genuine enthusiasm for science, for his hallway whistling, as he traveled to and from the laboratory, and for his tireless role as a volunteer for both *Circulation Research* and the Heart and Stroke Foundation of Canada. Most of all, Frank will be missed by Pat and the girls as a loving husband and father.

A publication award has been established by the Division of Cardiology and the Cardiovascular Research Group at the University of Alberta to honor Frank. This yearly award will be presented during our annual Cardiac Sciences Day, and it is designated for the young investigator in Alberta who has published the most innovative paper in the preceding year. Applications or donations can be sent to Dr Gary Lopaschuk or Dr Stephen Archer.

A full eulogy to Frank, as well as a more complete description of his accomplishments in engineering and medicine, can be found in an online supplement (see online tribute; <http://www.circresaha.org>). The following quote applies most aptly to Frank:

In the light of knowledge attained, the happy achievement seems almost a matter of course, and any intelligent student can grasp it without too much trouble. But the years of anxious searching in the dark, with their intense longing, their alterations of confidence and exhaustion, and the final emergence into the light—only those who have themselves experienced it can understand that.

—Albert Einstein



Dr Francis Xavier Witkowski, FACC, FRCP(C), Professor of Medicine, Division of Cardiology and Cardiovascular Research Group, University of Alberta. October 28, 1947–December 17, 1999.

The opinions expressed in this editorial are not necessarily those of the editors or of the American Heart Association.

From the Department of Medicine, University of Alberta, Edmonton, Alberta, Canada.

Correspondence to Stephen L. Archer, MD, FRCPC, Department of Medicine, University of Alberta, 8440 112th St (WMC 2C2.36), Edmonton, Alberta T6G 2B7, Canada. E-mail sarcher@CHA.ab.ca

(*Circ Res.* 2000;86:823.)

© 2000 American Heart Association, Inc.

Circulation Research is available at <http://www.circresaha.org>